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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,645	11/19/2001	Michiel Adrianus Henricus Van Der Aa	APV31511	9670
7590 12/15/2003 Stevens David Miller & Mosher 1615 L Street N W Suite 850 Washington, DC 20036			EXAMINER GOETZ, JOHN S	
			ART UNIT 3725	PAPER NUMBER <i>is</i>

DATE MAILED: 12/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No. 09/914,645	Applicant(s) VAN DER AA ET AL.
Examiner John S. Goetz	Art Unit 3725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 9/13/03.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 13-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 17-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8. 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment has been received and entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Applicant's election is recognized and the Restriction Requirement has been made final. Claims 13-16 have been withdrawn from consideration.

### ***Claim Rejections - 35 USC § 102***

4. Claims 1-8, 12, 17-18, 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Sun (6,044,676). Sun discloses in Fig. 2 each and every element claimed. Specifically, in Fig. 2, it can be seen that the first entry angle (where die and workpiece first meet) is near perpendicular. In a subsequent zone (label 123 in the Fig., but referred to as 128 in the specification), the entry angle is clearly larger than the starting zone angle. Finally, after this subsequent zone, there is a land zone with an entry angle of 0°.

### ***Claim Rejections - 35 USC § 103***

5. Claims 9-11, 19, and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun. These claims add various range limitations. These ranges involve process and structure characteristics that are clearly disclosed or inherent in the Sun reference. It has been held that discovering the optimum workable range involves only routine skill in the art. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454,

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456, 105 USPQ 233, 235 (CCPA 1955). Thus, it would have been obvious to one of ordinary skill in the art the time of the invention to include the claimed ranges.

6. In the alternative, claims 1-12 and 17-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jansen (4,881,394). Jansen discloses each of the elements of the claimed invention except the entry angle configuration. When discussing the various entry angles, however, Jansen does disclose a range of configurations that include the configuration claimed by the applicant. Specifically, Jansen discloses that entry angle of the first zone is in the range 8°-10° (column 4, lines 63-63) and in Figs. 3A-D discloses a subsequent entry angle in a range of 2°-10°. It has been held that discovering the optimum workable range involves only routine skill in the art. “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). Thus, it would have been obvious to one of ordinary skill in the art the time of the invention to provide the claimed entry angle configuration in view of Jansen’s disclosure.

7. Claim 26 is are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun in view of WO 94/22607 or Jansen in view of WO 94/22607. Claim 26 adds prestressing of the die. WO 94/22607 teaches, in the art of forming tools, the use of a prestressing ring in order to “avoid the formation of cracks or other fissures” (see abstract). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to prestress the forming die in order to improve and maintain the structural integrity of the die, as suggested by WO 94/22607.

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*Response to Arguments*

8. Applicant's arguments with respect to claims 1-12 and 17-26 have been considered but are moot in view of the new grounds of rejection.

*Conclusion*

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

10. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John S. Goetz whose telephone number is 703-308-1411. The examiner can normally be reached on Mon, Tues, Thurs, Fri 7:00am-5:30pm.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allen Ostrager can be reached on 703-308-3136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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13. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-3136.

JSG



ALLEN OSTRAGER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700